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WHILE THE RIVER WAS HIGH

The sun stood over the sacred silk-cotton tree toward the Gankwe side of the land. Across the path leading from somewhere in the back of our shelter the parasol ants, each with its strip of green many times its size, made their way toward an unknown spot where no shelter stood, and no one trod. Like a wave the wide ribbon of green rose and fell as it crossed the ridges of the pathway. In unending numbers they came, and the lizards darting in and out of the brush swerved in the direction of the shelter to avoid the marching line, so that at our feet things moved now up, now back again.

While the men were at the landing place, one of the women who was drying rice on the high flat rocks opposite our shelter paddled over in her boat, and, passing the men with a formal greeting, walked on and stopped to talk with us. She was not a young woman. Her time for childbearing was long over, her wrinkled breasts sagged almost to her waist. The cicatrized designs which once had stood out so clearly, and in her youth had been so valued, were but faintly penciled on her face and about her breasts. Had she cared, she might have reopened the cuts, might have had ashes rubbed into them to make the keloids stand out black and alive against the dark brown of her skin. But what need had a woman her age to care? What need to urge life into symbols of fertility on face and between breasts and about her navel, when her time for fruitfulness was over? Of what use to reanimate the incised scrolls between her thighs, when the legend they told in terms of reproduction was for her a dead legend?

She came toward us slowly, balancing a bottle on her head. A faded cloth covered her from waist to knee, and at her waist a bit of the kerchief necessary to the attire of the married woman, even at work, could be seen. She wore a few beads on a cord about her neck, but she had no other ornaments, for ornaments were for festive occasions, and the cloth tied about the neck and worn cape fashion was for women who had children to carry straddling their backs, and woven garters below the knee were conceits of the young.

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but he did face about, and forgetting his seketi began to pole in earnest.

In a few moments his body glistened with the exertion, and over the circle and snake of kamemba in the small of his back the perspiration ran down in a trickle. When he had almost caught up he slackened his speed, and he and Bibifo talked about the river. Old Bibifo knew the river well. He was born beyond the Granman's country. A snake swam across the path of the boat, Bayo said. It was good luck. "See, look," he called. His eyes were sharp. The old man saw it, too, and then he called to us. There, close to the shore, a little ahead of us, a constrictor twined its tail about a liana, hanging head down, with a salamander slowly disappearing into its mouth. There was a slight jerk, the liana shook, the snake swallowed, and another bit of the salamander was out of sight.

Farther ahead we heard the report of a gun, and the crying of the mate of the wounded bird followed us for a long while. Bayo and Bibifo identified each cry, called by name the things that grew, planned about their timber rafts when they got back, until the next rapids were reached and passed and the conversation could be resumed, and then they talked about things which they did not care to have the Bakra know, and though they spoke none of the words of their ritual language, we could not understand anything they said. It was not until later that we learned to work out some of the elisions in their speech.

A strip of sandy beach showed where a village stood, and as we passed it, we could see the azang, the spiritual guard of palm fronds, preventing evil spirits from entering the village. We saw also a strip of white hanging from the end of a stick which had been put up for the ancestors, and beyond, the low shelter for the roughly carved and weathered image holding an obia pot on its head. Under the azang the path stretched like a narrow ribbon which was soon lost as the walls of green converged.

"Is that another village?" we said, pointing at a pale stretch across the river.

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smaller boats were to be brought up each by its own men. Each selected a place, and the shrill shouted directions could be heard above the falling water. Up, up, they came, the man at the stern holding with his stick, the man at the head up to his shoulders in water, tugging, pulling, hauling the boat over. Once Asikanu's pole slipped, and his boat swung toward a rock, but it caught again and he held it with the fierceness of a man defending himself against an enemy, and then he, too, cut across and found the firmness of the friendly sandy bottom.

But when the five boats were at last together above the falls, out came machetes to sharpen the ends of the pole-sticks, for an encounter such as they had had the moment before shredded the hard wood into fiber.

Ahead the water was still. The hard work of this day was over. The men straightened their loin cloths and again began to make their way along the banks of the river. The village where we would camp that night was somewhere before us. The sun was nearing the treetops, and the shrieking pairs of parrots were flying over us to the west, seeking their roosting places.

The short dusk was upon us.

"It is not far," said Bayo, speaking of the village ahead.

"Will we get there before dark?"

"*Masa Gadu sabi*—God alone knows."

"*No fe', Bak'a*—Don't be afraid. We know the river."

The Bush Negro and his river! Seeing the prodigious strength of the men, their great knowledge of current and rocks and channels, one was not afraid. Softly the pole-sticks slid into the sand banks, softly the paddles dipped, and Bayo sang his seketi.

"*N'an g'wa a Lamé*
A s'ib' ko' de muye."

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133 But now a soft haze floated over stream and bush. To the right was the Ingi Sopi channel, dropping so sheer that not even an unloaded dugout could make its way up the rapids, not a single log of wood could be floated down. To the left was the Mamadam, a smoother, more rounded slope. It was up these falls that our boats would later be hauled.

501 484 Below us on the rocks our men were unloading the corials and carrying the provisions along the narrow trodden path to the topmost ledge of the falls, where the empty dugouts would be reloaded after they had been taken up through the streaming water.

133 Beyond lay the full stretch of the river. As far as the eye could see, there were none of the channels, none of the many islands which are met with everywhere on this river from its very headwaters to the reaches of the tidal belt near the coast. About us was a stillness which the very roar [136] of the water heightened. The parrots had long ago passed on in pairs. The butterflies would wait for the sun before they went winging from the east bank to the west. This was a moment of pure interlude. No sun, no breeze, no 000 sound, no glow. This was the moment before the fragmentary dawn would end, before the haze would lift, this the moment when night, having met day, as the Bush Negroes said, was disappearing from sight.

"It is fine here, ai!" Bayo called to us, as he walked on [482] with a large canister balanced on his head, making his way up the rocks with the sureness and ease of one who is strolling down a lane with the consciousness of a pleasant encounter at the next turning.

798 346 As soon as the mist had lifted, we walked up the rocks to the shrine. Facing us and the lower river, a tall, slender pole, weathered to a pale silver, stood higher than the roof of the shrine in front of which it was planted. At its top were the crude outlines of a head and, some three feet from its base, two side pieces were nailed to it and grounded at an angle to steady the image against the onrush of a sudden wind. A short distance from the pole was the shrine

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241 away from the river? When the big rains come, the river
361 goes up more and more. If our crops were too close to the water, then in the big rains the land would be flooded, and the crops long under water. . . . Yes, and we have to
[136] think of the ants, too. Ants, once they find their way into a field, will destroy everything. They like especially the
[137] green leaves of the young cassava plants. When the young leaves go, there is no cassava. So we move farther and farther away for our fields. Two, three years, and new fields must be cut, so that the yield might feed us all."

311 Once a field had been deserted, say, for five years, why
241 did they not reclaim it later? we enquired, for by that time the big bush would have made fertile again the soil that had been exhausted.

"In this bush we do it like that. Why, I don't know. Our ancestors found much land for us. When we want new fields, we cut farther and farther into the bush."

5

As Bayo and Angita set off for the dance at Pa'aba,
[521] Kasanya and Sedefo joined us, and we talked of crops and planting, of woman's work and man's, of good harvests and bad, and this is what was told us.

[462] Finding a new field and clearing it is a man's task. If a man is about to be married, or if the field a man's wife works has become exhausted, then he goes into the forest, near to the planting ground of his mother and to the fields of
311 his family, and casts about for a place to clear. A field
241 must not be in a hollow, or the crops will not grow, and
791 rice needs the sun of a hill slope to thrive. Once having found a spot where the drainage is good, he looks about to see if the spirits will allow its use. Patiently, painstakingly, he goes from one clump of matted vines to the next, machete in hand, searching for signs of an ant hill, or an Akatasi tree that is sacred to the gods of the ant hill, or for snakes, or a natural clearing belonging to the Apuku gods of the bush. No silk-cotton tree must be there, no loko tree wherein dwells the god of the same name so near that it

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Chapter VIII

PARENTS, CHILDREN, AND GRANDCHILDREN

I

512 WE WERE aroused early after our night of stories. The women were moving about, getting their morning meal before daybreak came to give them light for their harvesting. There was much they had to do. Late that afternoon they would be returning to their [527] villages, for the next day was sacred to the Earth Mother, and no work could be done in the fields. Today, added to the round of harvesting were the preparations for the return to their village. The rice that had been cut during the week would have to be carried there for drying and winnowing, and yams and peanuts and beans were to be brought in.

• 136 Not far off, in the bush, the "baboons" were crying. We had been told how these howling monkeys lived in bands, and how they had an "old man" for leader. Their strange cries, ringing through the forest, sounded like despair made articulate. A terribly moving reiteration of four or five wailing notes went on and on, rising slowly in volume, until their cries blotted out all other sounds, and then, like a wave receding, diminishing until quiet reigned again. But when we had given up listening for its distant echo, there it was again, filling the darkness of the clearing with despair, until, at its very height, we heard the low, penetrating grunts of their "*G'aman*—Chief" and instantly all was still. They were done for the night. With daylight, they would go deeper into the bush.

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Chapter IX

A NIGHT AT S'EI

I

133 137 FROM day to day the mood of the river changed, and the mood of the bush changed with it. The dankness of the river bank gave way to the smell of red, sun-scorched earth. No longer was the farther shore the forbidding wall of a great canyon. The flowering lianas, as they climbed a hundred feet and more from the roots of the trees they had enveloped, were making of it a tapestry. The blooms which showed against the masses of green seemed at first of the palest yellow with threads of white, or yellow with glints of gold in them, or the faintest of orange and violet. Later when the flaming gold, the scarlet and purple clusters appeared, they still did not mar the somber weave of the timeless pattern, for the deep note of this bush in any season is green, and no pushing, garish colors, no conceits of turning leaves or fragrant flowers can sound an echo here. As well expect the brilliantly tinted butterflies cruising from one bank to the other to make a whir in their passage, as to look for it to be otherwise.

● [136]

The air, however, became steadily drier, the green more varied and pleasing, and the land rising and sloping gave an occasional glimpse of a horizon. If something in the shade of the river banks still spoke of the way of the constrictor, the sudden lashing out of the tail, there was now also the pleasant consciousness of its long lethargy. The swish of wings overhead, when we walked for short intervals through

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been packed in baskets and transported to a safe place. The Dutch, tricked by the wily Bonny, found Cofaay bare.

Provisions being imperative, a small detachment was sent back to Paramaribo for them. The detachment was cut off by the rebels. European soldiers were spared, but every ranger was killed, since the rebels had sworn none of them should leave the bush alive.

After one or two other engagements, in which the Bush Negroes were defeated, with the help of Indian tribes, the expedition returned to Paramaribo. Both sides had fought each other to a standstill. The Europeans were weary of the hazards of the bush, of the vicious fire-ants and carnivorous mosquitoes. Above all they knew that if the Bush Negro had possessed ammunition they would never have returned.

From this point on the warfare ceased by common consent. The Bush Negroes were left alone to duplicate in the American forest their former life in Africa. The slaves who never revolted were finally emancipated in the nineteenth century, and their descendants today, still living with the whites in Paramaribo, are known as Town Negroes. The bush tribes call them *bahkra schlaff*, or "white man's slave."

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562 the river—the glinting light on the black skins, shining with sweat and spray, and the veined muscles that roll and subside as the dripping pole goes down, first one end and then the other, into the yellow water. Hour after hour they strain their bodies against the bending poles. Without warning a [132] heavy tropical downpour will blanket the river with sheets of rain, but the *corials* (canoes) go on. When the rain stops the hot sun quickly dries the black skins.

137 All along the river the foliage towers upward from the 502 water's edge. Great trees rear high their masses of limbs and verdure. Going upstream the boatmen stay close to the bank, for there the current, checked by myriads of roots, is not so swift. Often the men can reach out of the corial and touch the foliage. In sharp contrast with this green is the brown colour of the muddy stream. The sunlight glares on the surface, except where the overhanging wall of trees throws a shade upon the water. The black boatmen blend in with the yellow river, the green foliage, and the metallic sky.

136 Parrots scream overhead. A pair of scarlet macaws cackle at each other. Leaping fish shimmer in the sunlight, falling back into the river with a white splash. Bats from underneath logs, disturbed by human intrusion, disappear into the bank a hundred feet ahead. The corials are eyed intently by parakeets feeding high up in the air, perched on tree limbs along the bank. Little black and white swallow-like skimmers scurry over the water just forward of the bow, which keeps pushing on through the white riffles. Huge water-fowl flap their wide wings and sail gracefully away.

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Hot sun . . . Gush of rapid water . . . Bees and dragon-flies cruise about. . . . Rain . . . Hot sun . . . There is a crash of branches in the bush; some animal, probably a tapir. . . . Kingfishers chase each other over the yellow bosom of the river. . . . Talkee-talkee chatter. . . . The white man curses the flies. . . . That tiny speck a mile high is a vulture, wheeling without effort in great circles. . . . Rapids . . . Cloud-banks in the sky. High-lights on the river . . . Hot sun . . . Poling up the rapids . . . Grunting Negroes lean on the slick wet poles. . . . Still water . . . The paddlers step overboard to drag the boat up a difficult piece of rapid water. . . . The canoe is stuck on a rock. . . . It swings broadside to the current. . . . The river almost wins; we get away by a hair's breadth. . . . Over into the still water . . .

Moi-Man sings a Djuka song. . . . Alligators sunning on sandbanks . . . Gorgeous Morpho butterflies go by on shimmering blue wings. . . . Jewellery is made from them. . . . Showers of little white butterflies cross the stream, fluttering tirelessly. . . . A feast for the swallows . . . Spray from the fast waves . . . Wet tarpaulin over the baggage . . .

The forest is as impassable now as it was in the days of the rebellion. There is no way of penetrating the interior except by travelling up one of the great rivers of Surinam. The Bush Negroes spend much of their time on the rivers; their water-craft is exquisite. To make the laborious passage upstream the expedition is entirely dependent upon these black polers. They consent to accompany the white men—*bahkras* as they are called—with no great eagerness. The Djukas realize that

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648 have a tribal language called *odo, deepee-talkee,* or *Saramacca-*
[191 *tongo* known only among themselves; they are members of
198] the Saramaccaner tribe.

Before the other corial is out of earshot, the Djukas bid us good-bye with the familiar words: *"Wakka bon na watra, bahkra!" "Gran danke, matio"*—"Many thanks, my uncle," we respond, adding the *o* sound to the last word to make it carry over the waves, as they do. To them "uncle" is the most
[576 respectful appellation that can be used, similar to our respect-
604] ful use of the word "father." For them a maternal uncle is more important than a father.

For a while now the poling continues in silence. Further on we pass a lone Djuka on the bank, skilfully setting a fish trap constructed of sticks and *lianas.* Far away upstream can be heard the muffled report of a shotgun; some black hunter is bringing in game. The angry currents slap constantly against the side of the corial. We round another bend and see ahead only more rapids, where rocks make innumerable white ripples in the muddy water.

A stop is made for lunch at one of the many islands. Bundle brings out canned food and the gipsy pot. The river looks enticing and cool. The bahkra begins taking off his clothes for a swim in the water near shore. The Negroes are abashed at his nakedness, and Bundle tactfully advises him to be more modest.

● 136 The waters in this part of the great South American rain forest are infested with the Brazilian piranha or piraya (*Serrasalmo sp.*), a species of carnivorous fish. They are small,

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something like bass, but with undershot thick jaws and heavy teeth. They run six to eight inches long and seldom weigh more than half a pound. But they travel in schools and attack simultaneously, so that any flesh in the water, human or otherwise, with a bloody surface exposed, is torn to pieces in a short time. If a bush-hog is killed and suspended in the water, the smell of blood attracts these fish; in an incredibly short space of time the carcass is wholly devoured.

The Djukas have learned to be wary of this fish. On one occasion, when trading for a drum at an Aucaner village, the blacks handed the drum out to the corial on a long pole, rather than step a few feet into the water. Despite this fear, in poling upstream it is frequently necessary for the paddlers to get out of the canoe in water up to their armpits and forcibly drag it over the rocks. On such occasions their courage is immediate and unfailing. They enter the water, knowing that piraya may be present. There is no other way of getting the boats over rock-studded pieces of fast water, where paddles are useless and poles insufficient. They jump out into the river, taking the chance of having pieces of flesh excised from their limbs.

Fear of this fish prevents constant bathing in all parts of the river. Now, however, after a long hot trip, the lure of a cool bath in the fresh flowing water overcomes the bahkra's caution, but the Djukas, as soon as they have grasped the white man's intention, will not permit him to enter the water. They gesticulate violently, waving him back with rapid and excited words—no, no, he cannot go in—piraya, piraya! He is

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136 almost forcibly prevented. But when the day's journey is over,
484 and we have camped for the night in an upriver village, the
648 paddlers will take the risk of bathing in the cool stream. Even though there are no piraya in the immediate vicinity, the bathers will not linger long.

484 All the long, heavy afternoon the Negroes toil slowly with
648 the great poles. Troe stops to cut some herbs for medicine. Flagawai sharpens the end of his pole with a bush-knife to give it a better grip on the river-bed. We have never seen better paddling, not even in the Canadian woods, where the Indian guides retain the canoe-craft of the American aborigines, nor on the Mazaruni River in British Guiana, where the black diamond-seekers haul their great whaling boats over the rapids.

There is a low falls across the river. The corials have to be dragged up over the slanting slippery rocks into the higher water beyond. Everyone gets out. The boatmen quietly decide the best path; there is little hesitation and no debate. Brown hands catch hold of the gunwales and brown feet begin to strain willingly on the slick wet rocks. The lumbering boat slowly mounts the incline. Here again the white man's life is in the hands of the Negroes; if the corial were to upset, the food would be lost, and the trip would end disastrously.

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437 The reply is short and spirited.

"Gimme."

Which does not have to be translated.

574 We sleep that night in the Bush Negro village. A dilapi-
609 dated hut is assigned us, the hut of a dead man. There are
136 tarantulas on the cross-poles; we are not particular. The paddlers sleep elsewhere, being taken into friendly huts about the village. Except for the ghosts of the departed Bush Negroes, our hut is quite empty. The hammock is slung and the mosquito netting put in place. Mosquitoes and insect pests are not as bad in the jungle as commonly reported. They seldom caused us any discomfort. It is true that one of the boys contracted malaria during an expedition, but the parasites may have been dormant in his blood for some time previously. Our precaution against malaria was ten grains of quinine sulphate each night before retiring under the mosquito netting.

512 Far into the evening the Negroes will sit around the camp-
[521] fire and tell stories, their loud, musical Negro laughter carrying a long distance on the night air. Walking by each hut we see a tiny light flickering inside. Occasionally an infant cries. We sit before our doorway, amusing a group of chil-

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these animals. So the hunter is occasionally surprised to find a big cat responding to his game call.

Far up the river, jaguars have been known to come near a provision clearing and carry off an infant while the mother was at work in the cassava field. The grown Djuka, however, is not afraid of these cats. The jaguar is a medium-sized feline, the third largest of the cat family, but it is essentially cowardly. If a lone Negro encounters one on a game trail, a duel commences that usually ends with the shooting of the jaguar. On one occasion we saw a hunter come back from the game trail, armed only with a machete, who had met and killed one of these cats.

There are several smaller cats in the South American jungle, ranging in size from the puma to the diminutive jaguarundi. The boa constrictor is not the menace that some travellers make it out to be. The Bush Negroes will not kill either a boa or an alligator, nor will they allow a white man to do so. If they see the white man aiming his gun at snakes, they will knock up the muzzle. Such reptiles are sacred. Some of the Indians of the district, on the other hand, are fond of snake meat, and hunt it regularly. But the Bush Negroes look down on them.

In setting traps the Bush Negroes exhibit the typical cunning of jungle dwellers. They have preserved the West African types of traps. Trails on which armadillos forage are set with a shotgun, in the middle of the path. By seizing the bait the animal shoots itself.

At night on the game trail the lone hunter builds a lean-

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224 648 The next day the hunters rouse early and breakfast in the freshness of the warm morning. Two of the Djukas refuse absolutely to accompany the bahkra any further. The white man, they say, goes through the jungle like a thunderstorm and brings bad luck. The prospects of getting any game with him around are exceedingly small. They get out their hunting amulets, and rub on their gun-barrels a concoction prepared by the medicine man. Daniels laughs at this, but they refuse to be teased. [789]

"You'll see!" they assert doggedly, certain of their magic.

The party splits up to go in three directions. Two bearers remain with us, one posted out ahead as a tracker, and Daniels, who brings up the rear as gun-bearer. The other two Negroes go in different directions and are immediately out of sight. We continue ahead, cutting the way through the bush—there are no trails. For two hours we tramp along without sighting game, realizing that *more things see us than ever we see*. The jungle is not teeming with game, as popularly believed. There is an occasional herd of bush hogs, but in general it is necessary to hunt long and hard to bag any amount of meat. It is doubtful if a man could subsist on the food his gun brings in, not because the game is lacking but because of the difficulty of seeing it. [136]

224 The Djukas also hunt in other ways. One device is "still hunting"—sitting motionless in a tree beside a game trail, waiting for some animal to come along underneath. The Indians' *curare* and the blow-gun which shoots the poisoned dart are not employed by the Negroes. The only co-operative [411]

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241 313 Behind each village, a quarter of a mile to five miles distant, are its provision grounds, which the women work. They consist of tiny patches of half an acre or more, carved out of the heart of the jungle by means of terrific labour. It [442] takes the men weeks of work with axes and bush-knives to clear the ground. The fallen trees, some of extremely hard wood, are cut up, burnt, or carried away. The brush is cleared with a machete, or bush-knife, which Negroes call a neefee; they swing this blade with amazing force by making the wrist the centre of its arc.

462 241 The women, as in most primitive societies, tend to the planting and harvesting of the crops. They are helped by the men of the family on some occasions, such as when the harvest is threatened by voracious parasites. The arduous labour of cultivating the stubborn earth comes so naturally to a Bush Negro woman that she is incredulous when told that elsewhere the males alone till the soil.

● 136 241 A leaf-cutting ant, *Ecodoma cephalotes,* that carries small bits of leaves into its nest, preys on the cassava fields. These ants march in two parallel columns, one going to the fields and the other returning, and systematically ruin the crop. The bit of green that each ant is carrying off looks like an umbrella; hence they are called umbrella ants. They live on a fungus which they grow on the cut leaves. Large numbers of them working together can denude an entire cassava field in a comparatively short time.

134 241 The jungle ground is not excessively fertile, for the incessant downpours leach out the humus, and there is not

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Rice, especially when ripening, is attacked by birds, particularly the parakeets and parrots. These can destroy an entire field in one evening. Sometimes the Djukas are forced to sit up all night with shotguns to scare them off. Weevils and plant diseases are also common.

They have large sweet potatoes, known as yams, but no white potatoes. Corn, which they call *koru;* okra, or *oko;* and peanuts (*pinda*), form a minor part of the Djuka diet. There are occasional banana and cocoanut trees, and some pineapples and breadfruit. Some few additional nuts and fruits are furnished by the jungle. Palm oil, of which they are excessively fond, is another part of the commissary. No journey is undertaken without a liberal supply. It is obtained by squeezing the nut or fruit of a species of palm, called the mareepa. To the white man it tastes like olive oil. Sugar cane is seen in a number of villages, as are domestic fowl. No cattle or swine are to be found.

Thus the Bush Negroes carry on with courage and extreme hardihood under the implacable necessities of life in the enemy jungle, in which the white man has never been able to make his home successfully.

A common sight along the river is a Djuka black, poised on a slippery rock in statuesque immobility, his bow flexed and arrow drawn, shooting for fish.

/138 cont./
241/825 particular suffers greatly from this type of ant, but maize, tajer, and bananas are also eaten. This plague is so serious that the clearing of a new ground is partially determined by the occurrence of the nests of these ants at the place. Normally these nests lie fairly far apart in the forest, but as soon as the crops of the grounds come within the domain of the ants, the nests grow rampantly. In addition, at just about planting time the ants produce numerous sexual forms, which, as a result of the cleared lands, have a favorable opportunity to swarm and found new colonies. The leaf-cutting ants are therefore "Kulturfolger" /followers of culture/.

As a result of this plague of ants, it is usually not possible for the Bush Negroes to cut extensions to the existing grounds for longer than two to three years. After all, the kapoeweri of the abandoned pieces of ground functions then as a hiding place for the younger ant-nests, and one drags, as it were, the ant plague along with one. There is no combating the ants, and through impotence the Bush Negro is forced to yield the field. This flight before the ants consists in the search for new grounds farther into the bush or, in case this is no longer possible for some reason, in the occupation of new lands elsewhere along the river.

137/136 /139/ Stahel (1) has pointed to the fact that among the Bush

[113] 1. Het Bosnegervraagstuk en het Coronieplan /The Bush Negro Question and the Coronie Plan/, Department Landbouwproefstation Surinam /Department of Agriculture Research Station, Surinam/, Report No. 9, October, 1944, 28 pp.

Negroes the older grounds change into a low second-growth, called by him "ant-kapoeweri" /ant-bush/. In effect, in many places where a dense Bush Negro population is found, such a strip of second growth occurs along the rivers. According to Stahel, this inferior bush comes 13 about through the presence of the great nests of leaf-cutting ants. Ac- [114] cording to his calculation, at a density of six ant nests per hectare (a maximum which is confirmed in the vicinity of Paramaribo, but which, according to my own observations in the Bush Negro lands,

/139 cont./

13 seems too high to me), the ants can bring into the soil each year two to three tons of leaf material per hectare. As a result the soil would be so enriched with humus and, in addition, through the construction of the numerous nest corridors, receive so much extra ventilation that the oxygen content and the microbiological condition of this soil would tend to differ from the mineral soils in which the virgin forest is rooted. As proof of this, it is stated "that even the oldest ant-kapoeweri directly behind the villages shows no tendency to grow into normal high forest" (p. 13).

114 It does not seem correct to me to ascribe this kapoeweri
137 phenomenon only to the presence and the activity of the leaf-
● 136 cutting ants. In my opinion the ants here constitute a troublesome contributing factor, for when the virgin-forest grounds are abandoned by the population and no new food material is available to the ants while the kapoeweri gradually grows into higher forest, then the balance in the ant population re-establishes itself. This process takes place at a slow rate, depending on the local circumstances, but it leads to the re-establishment of the original situation. There is, however, one condition connected with it, namely, that the forest be left in peace for a long enough stretch.
241 Now this last is not the case for the grounds area of the Bush Negroes.
134 They return too soon (within ten years) to clear grounds again, with the consequence that the soil becomes too exhausted and the recovery of the forest becomes impossible.

171 Proof for this viewpoint is already provided by Stahel (loc.
241 cit.) in his consideration of the agriculture of the upland Indians.
137 The absence of the ant-kopoeweri there is not a matter of a lesser
[136] ant infestation, as Stahel /140/ believes -- for in places this is equally serious -- but of a less intensive use of the forest lands.
[161] The Indians are present in small numbers (a few hundred, as against
423] thousands of Bush Negroes), while only communal plots are laid
[361] out for one village, and not different ones for each family. In addition, the Indians move frequently in order to find new hunting and fishing grounds.

/140 cont./

241 134 137 There is yet another factor which plays a role in the origin of the grounds-kapoeweri. This is the use of fire in clearing the ground. The burning of the cut forest is done at the expense of the humus on and in the soil. The fertilization with ashes that one obtains by it only partially covers this loss. Furthermore, under the influence of the fire there are great disturbances in the balance of the microflora and fauna of the soil, hindering the conversion of organic materials into inorganic compounds. Sun and rain bring changes in the structure of the scorched earth, which forms a cement-like crust and becomes sealed. Also the growing of cultivated crops, especially cassave, draws many mineral components from the soil.

13 It is clear that the soil needs time to recover after this disturbance of the balance. This period of time is estimated at 25-30 years. The leaf-cutting ants play a part in this; they again enrich the soil with humus by bringing great quantities of leaves into their ground nests. In addition, they ventilate the soil by digging numerous nest corridors. In this manner the ants contribute [242] to the recovery. It is well-known, moreover, that the soil on old leaf-cutting ant nests is fertile; one likes to plant bananas on it. If we assume with Stahel that in this kapoeweri six ant nests per hectare are found, then these nests together would only have a maximum surface of one-tenth of it. This would never be able to hinder the full growth of the forest.

● 136 137 241 That the leaf cutting ants occupy the secondary growth, or at least are present there in greater numbers than is normally the case in the forest, may be a consequence of the laying out of new grounds within their domain. Because of the lack of land, the Bush Negroes are constantly trying to lay out grounds again in this forest. The ants, moreover can maintain themselves because there are various forest trees that supply the ants with sufficient leaf material.

13 311 Thus, because of both the decreased capacity of the soil and the presence of the leaf-cutting ants, the ant-kapoeweri forms a terrain that has become unusable for present-day primitive Bush Negro agriculture./ 141/ And from the standpoint of forestry too the ant-kapoeweri is worthless.

/146 cont./

245 Bacoven (bakóeba, bákba).

Planted like the bananas. The growing time varies from 10 to 15 months. The banana-bacove is grown the most. The varieties are indicated with the following names:

bigibakoeba or langa-finga, banana-bacove with long fruit (Gros Michel type); produces the bunch after 10 months and this ripens in five months;

watramama-bakoeba, a kind of congo-bacove originally from French Guiana, short variety, bunch matures in three months;

koboto-bakoeba or soeknoe-finga, small yellow, sweet variety of the size of the apple bacove or smaller (missie-finga); bunch ripens in three months;

indji-bakoeba, short, thick, red variety, sweet in taste, with yellow fruit-flesh; bunch ripens in three months.

[262] The bacoven are only eaten as fresh fruit and are very popu-
● [136] lar. /147/ The leaves of bananas and bacoven are sometimes severely eaten by leaf-cutting ants.

244 Tajer (tája).

One finds tajer on all grounds, standing in scattered groups. It is harvested after 8-10 months (August-October), but also continuously thereafter. There are various kinds in use:

agauw, large variety (pomtaja); tubers remain good for a long time; also found in the villages;

244 sjoe, smaller variety with yellowish tuber, tubers remain good for
262 a long time; the leaf is eaten as a vegetable;

dasini, larger variety with yellowish tubers, which is frequently planted because of its tastiness; the harvesting is done in small bits at a time, for the tubers rot quite quickly; the leaf of this too, is used as vegetable; a small variety of dasini is also called chinees taja;

wititaja, smaller variety; tubers remain good for a long time; leaf is also eaten.

252 Tajer tubers are boiled, like potatoes, frequently with fish or meat and oil, into a soup.

/147 cont./

244 Patatas (patáta).

Patatas are planted in patches; they creep with long tendrils in between everything as a weed. Even after the grounds have been abandoned, they continue to grow in the open patches. They are harvested in the long dry season, but there are also three-month varieties. There are white, red, and yellow varieties under the following names:

plata patata, white variety, frequently planted;
lebi (redi) patata, red variety, often runs wild;
abawini, yellow variety, frequently planted on grounds;
sakoela patata, yellow variety, idem.

[252] The tubers are eaten boiled, like potatoes, usually prepared with oil, or cut into little pieces and made into a soup. Rabbits [136] and pigs are likewise lovers of these tubers.

Napi (napi).

Napi is planted scattered next to sticks in order to allow the vines to climb. It is not missing on a single ground. The harvest time falls in the long dry season from September to November. There are red and white varieties, which are known by the following names:

kakaboeroe, red on the inside, with red peel;
gangasombo, white on the inside, with red peel;
witti napi, white on the inside, with yellow peel;
finga napi, purple-red variety with divided tubers;
waka waka-napi, purple-red variety, creeping, with large, long tubers.

[252] Napi is eaten boiled like a potato. Most of the varieties are used unpeeled; when they are prepared with meat, however, one removes the peel from the tubers.

/148/

Yams (yamesi).

The yam is found everywhere and is planted scattered. The harvest time is October or later. Two varieties are known:
maka yamesi, with thorns on stalk, planted with buds from the tubers;
afakõh, planted with stalk shoots.

/150 cont./

245 In more favorable places it grows fairly well. The production
[262] is moderate. The nuts are eaten fresh or, as water nuts, are
[136] emptied by drinking. Many trunks exhibit the traces of Castnia daedalus infection (Drietabbetje, Fisiti, Granbori).

Manja (majang).

[262] Grows in all villages into mighty trees and in February-March produces fruit which is especially favored for eating by the youth. Tetémanje and redbreast are the most common varieties. Abandoned villages along the rivers are frequently still typified by the manja trees.

Citrus.

Is represented by lemmetje (lemmeki), sour orange /zure oranje/ (alanja), /151/ orange /sinaasappel/ (pesina), and lemon /citroen/ (soetoen). This order roughly expresses the relative frequency. They are scattered and grow strikingly well in spite of neglect. With a little effort the planting of oranges could be ex-
[252] tended. Lemmetjes and sour oranges are frequently used to wash meat and various articles.

Guava (gobai).

[262] Stands scattered and is never lacking; the fruit is eaten especially by the youth.

Soursop (atoekoe).

[262] Occurs here and there; the fruit is eaten fresh.

Breadfruit tree (belebong, brèdebong).

[252] Is found in many villages. It is usually the chestnut-breadfruit, of which only the pips are eaten, roasted or boiled. In Langatabbetje we also saw the ordinary breadfruit.

Koesoewé (koesoewé).

249 Stands in each village, but occurs less frequently than among the Indians. The large pink blossoms and the red fruit contribute

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R /534 cont./

14 In the whole of the Amazonian forest these facts have been
16 observed since the seventeenth century and have led to the re-
182 placement of Indians by slave manpower imported from Africa.
114 The course taken in denying the biological realities and wishing to find at any cost a purely sociological explanation has inspired in recent years an ingenious explanation by several authors:

The success of African manpower was, according to them, due to the fact that the Blacks had a civilization closer to that of the Europeans, whereas the Amerindians were more hunters-fishermen than agriculturalists.

B
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[105] For any observer of good faith, the Indians of Guiana and
R the Blacks of the forests of the Congo and Gabon are largely
[433] on the same technological and cultural level. The Indians are
[361] certainly cultivators just as experienced as the Negroes; is one to forget that it was they who taught the rest of the world the greater part of the important tropical crops: manioc, maize, cotton, tobacco, and so many others? Hunting and fishing for them is only a secondary means of support; it is their instability,
R their lack of attachment to the soil, which may create an
[136] illusion on this point. It can be explained to a certain extent
[361] by the small size of the kinship groups; an ecological factor which does not exist in Black Africa must also be taken into account, the manioc ant, which swarms in particular in the zones habitually cultivated, promoting a seminomadism (18).

B
• [136] 18. This factor plays only a secondary role,
[361] since the Refugee Blacks despite the manioc ant, maintain villages of permanent residence, only changing their crop plantings, but it is certain that it promotes the dispersion of the groups and seminomadism.

R
14 These considerations do not pretend to give a complete ex-
16 planation of the social behavior of the Indians of the Amazonian
182 forest. The biological characteristics of the group are only one of the factors of this behavior, parallel to many others, notably

/6 cont./

824 wood is too hard to be worked with ordinary instruments or, on the contrary, because it is too soft, too easily attacked by insects, or
311 has a tendency to rot. The zone exploitable by native procedures is limited (for the floodable zones /1/ do not allow fine woods) to the slope of the hills bordering the valley of the watercourses accessible to pirogues; beyond, the cartage of felled trunks becomes impracticable.

139 A very dense epiphytic vegetation connects the trees with
136 their upper parts; it is there that life blossoms out: flowers, birds, insects, and monkeys.

484 Progress through the forest is very arduous. The undergrowth,
489 shrubs, bushes, bound together by fine and elastic lianas, offers
[132] a constant obstacle, the machete /sabre/ must be wielded at each
[412] step. The nature of the terrain, a succession of bogs and hills
[133] with steep and slippery slopes, makes walking for heavily loaded men exhausting. On the trail one succeeds with difficulty in making more than 15 to 20 kilometers a day; in the uninhabited forest one can scarcely advance five to six kilometers a day by cutting the strict minimum as one does when hunting. The opening of a route permitting the passage of heavily laden men cannot progress more than three kilometers a day on the average.

139 The great forest offers few real dangers, but it is an environ-
182 ment profoundly hostile to man, which does not present spontaneously any food resource and allows establishment of villages and cultivated areas only at the price of great efforts.

136 One meets few animals in the interior of the forest, and the resources for hunting are very limited; on the other hand, there are few harmful animals; wild beasts are few and practically do not appear; snakes are much rarer than on the coast and represent
164 only a slight danger. The most real dangers of the forest come from the fall of branches and epiphytes, principally when it is cleared for cultivation; each year there are accidents of this kind in Boni country. Besides, work in the forest is the occasion for many wounds which tend to ulcerate.

/7 cont./

132 The climate is relatively temperate and easy for the European
[513] to stand. In the forest the thermometer does not rise to more than 28° during the hot hours, to go back down to 20° at the end of the night: everyone sleeps with a blanket, Refugee Blacks and Creoles as well as Europeans. Humidity is very great during nearly all the year; precipitation averages three meters a year or about 50 centimeters less than at Cayenne. The year is divided into two seasons: "summer" from July to December, and the rainy season the rest of the year, with a maximum of precipitation in
133 May and June. The water level varies considerably in the course
182 of the year (several meters). The populations of the interior,
[361] spaced out along the rivers, suit the rhythm of their lives to the
[164] height of the water; the water rules transportation, fishing, and crops; moreover, a certain number of illnesses are in close relation to the rains, in particular those which have an insect for vector.

241 Almost everywhere the soil is very poor in organic matter
[134] and fundamental ingredients, very waterlogged, necessitating the practice of an itinerant agriculture on burned-over areas; the period of fallow ground varies from two to ten years, the optimum seem-
• [136] ing to be about six. The inhabitants of Guiana cannot allow ground to lie fallow regularly because of the ravages of the manioc ant, /8/ which is active especially in habitually cultivated zones.
[134] Vain and costly efforts made by Europeans notably at Saint-Jean du Maroni about 1950, have shown that the fertility of lands not
[242] burned over is practically nil. The Indians and the Refugee Blacks consider that the fertility of the soil depends exclusively on the weight of cinders laid down during the burning.

When burned-over areas are cultivated, only one harvest is obtained; but this harvest is abundant, and the soil thus utilized can be regarded as relatively fertile. The knocking down and burning do not require great labor, so that primitive agricultural methods
241 can be considered to give a good yield. As a matter of fact, the
179 diverse populations of Guiana, Creoles and Refugee Blacks, have entirely adopted the methods of work resulting from the millennial

/82 cont./

423 311 This fact is easily observable in the neighborhood of recently created farming habitations. In the figure "Distribution of lands ... in the neighborhood of the confluence with the Inini" (see at the end of the present chapter), the lands of the Antonu habitation are clearly seen distributed along two paths, one on each bank of the river.

241 423 In the sectors near Boni residence villages, cultivated in days gone by, the main lines of these boundaries are known everywhere. Still, they are far from being as precise as in the African countries with dense population, where the absence of manioc ants allows a regular rotation of lands. In Boni country this rotation is most variable, the duration of fallow ground going from two to 20 years and more. Vast sectors where the activity of the manioc ants suddenly becomes greater are abandoned for many years. When they are cultivated again, people no longer remember the exact boundaries of the former clearings and the new holders cut their clearings in their own way, taking care only that they remain on the lands of their lineage.

000 /83/ STUDY OF THE DISTRIBUTION OF LANDS
IN THE NEIGHBORHOOD OF RESIDENCE VILLAGES

Inventory of Part of the Cultivated or Fallow Plots
in January, 1957

621 241 Study of the clearings of Agodé (Boniville). The lands adjacent to Boniville are worked in a very unsystematic fashion because of the composite character of the village population.

613 Let us call to mind that Agodé includes fractions of six lineages:

/119 cont./

361 241 166 exhaustion of the lands does not seem to play any part: considering the sparseness of the population, one can either make new clearings out of primary forest or carry out any system of letting land lie fallow one wishes.

Most changes of location can be attributed to two causes of equal importance:

[136] [613] --The activity of the manioc ants; we have said that since about 15 years ago the principal soil of the Lapé lo, situated near Loka village, has had to be totally abandoned as a consequence of exceptional activity of manioc ants. From this resulted the creation of several farming habitations on the soil of the Lapé lo studied here;

361 241 166 598 --Personal motives, among which comes first of all disagreement among the members of a group. For example ○ Kulina and ○ Bakamaman (Boniville, Dju) made their clearings until 1950 with their mother Béniti in her farming village in Kuyaku locality (to the south of Kormotibo).

In 1950 there was a quarrel. Kulina and Baïkom have made their clearings since that time at the habitation of their father Malobi (Lapé).

[768] It happens especially that upon the death of its founder a farming habitation disappears or changes composition entirely because disagreements arise.

361 24 166 Another cause of change of location of farming habitations is change of activity of their occupants. For example, a man grows old, he no longer finds paid work, he creates a habitation in order to take up fishing (Akwadé's case). When he reaches extreme old age, he abandons his habitation to move close to his relatives (case of Samalobi, first occupant of the lands cultivated nowadays by Antonu village). /Page 120 blank/